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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/775,715	02/01/2001	Mani S. Abrol	1220335-991180	7897

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EXAMINER

CHEN, CHONGSHAN

ART UNIT	PAPER NUMBER
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2162

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/775,715

Applicant(s)

ABROL ET AL.

Examiner

Chongshan Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 7,10,13-26 and 29-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7,10,13-26 and 29-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10/12/2004</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12 October 2004 has been entered.
2. Claims 7, 10, 13-26 and 29-32 are pending in this Office Action.
3. Claims 1-6, 8-9, 11-12 and 27-28 are canceled.

### ***Information Disclosure Statement***

4. The information disclosure statement (IDS) submitted on 12 October 2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Response to Arguments***

5. Applicant's arguments with respect to claims 7, 10, 13-26 and 29-32 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 101***

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claim 10 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

**MPEP 2106 IV. B.2. (b)**

A claim that requires one or more acts to be performed defines a process. However, not all processes are statutory under 35 U.S.C. 101. *Schrader*, 22 F.3d at 296, 30 USPQ2d at 1460. To be statutory, a claimed computer-related process must either: (A) result in a physical transformation outside the computer for which a practical application in the technological arts is either disclosed in the specification or would have been known to a skilled artisan, or (B) be limited to a practical application within the technological arts.

Claim 10, in view of the above cited MPEP section, is not statutory because they merely recite a number of computing steps without producing any tangible result and/or being limited to a practical application within the technological arts. The use of a computer has not been indicated.

***Claim Rejections - 35 USC § 112***

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 16-19 and 23-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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10. Claim 16 recites the limitation "the feature vector comprising frequency values for one or more terms that appear in the query" in lines 2-3 of the claim. It is unclear whether the feature vector is reference to the feature vector of the document or the feature vector of the query.
11. Claim 17 recites the limitation "the query feature vector" in line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim.
12. The terms "short" and "long" in claims 18 and 19 respectively are relative terms which render the claims indefinite. The terms "short" and "long" are not defined by the claims, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.
13. Claims 23-26 are rejected on grounds corresponding to the reasons given above for claims 16-19.

***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

16. Claims 7, 10, 13-26 and 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Diamond (US 6,269,368 B1) in view of Culliss (US 6,539,377 B1).

As per claim 7, Diamond discloses a system for user behavior based searching of a document based on a query having one or more query terms, comprising:

means for determining a feature vector associated with a document, the feature vector comprising weights for one or more terms that appear in the document (Diamond, col. 2, lines 45-67, col. 18, lines 63-65);

means for capturing user actions in response to a list of documents produced in response to a query wherein the user actions include selecting a document from the list of documents (Diamond, col. 3, lines 1-4).

Diamond does not explicitly disclose means for modifying the feature vector for the document based on a sample of user actions captured during a query of the document so that the document is more highly ranked in response to the user actions, wherein the modifying means further comprises means for adjusting a frequency value of the terms in the feature vector that match terms in a query that produced the list of documents so that the ranking of the document is altered in response to the adjustment of the frequency values; means for storing the modified feature vector of the document wherein the feature vector for the document is modified and stored following each search session and sampled user action so that the modified feature vector of the document is utilized during and affects the results of every subsequent search session by

every user; and means for returning the same document to another user with the same query at a higher ranking due to the modified feature vector of the document.

Culliss teaches modifying the feature vector for the document based on a sample of user actions captured during a query of the document so that the document is more highly ranked in response to the user actions, wherein the modifying means further comprises means for adjusting a frequency value of the terms in the feature vector that match terms in a query that produced the list of documents so that the ranking of the document is altered in response to the adjustment of the frequency values; storing the modified feature vector of the document wherein the feature vector for the document is modified and stored following each search session and sampled user action so that the modified feature vector of the document is utilized during and affects the results of every subsequent search session by every user; and returning the same document to another user with the same query at a higher ranking due to the modified feature vector of the document (Culliss, Fig. 1, element 30, "Alter scores in index according to selections made by first user", element 40, "receive search query from second user", element 50, "present article related to second search query to second user ranked by scores in index", col. 2, line 28 – col. 3, line 67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the search method of Culliss which ranks the documents according to the search activity and behavior of previous users with the search method of Diamond. Because the activity of user selecting and viewing a document from a set of returned documents indicates the selected document is more relevant to the search query. Using this user feedback can rank the documents more accurately. The most relevant document will move to the top of the ranked list. This will help the user easily locate the most relevant document.

Claims 10 and 13 are rejected on grounds corresponding to the reasons given above for claim 7.

As per claim 14, Diamond and Culliss teach all the claimed subject matters as discussed in claim 13, and further teach the sampling further comprises generating a sample of the user behavior wherein the sample of the user behavior further comprises a query feature vector of the terms in a particular query and the feature vector of the one or more documents returned based on the query and viewed by the user (Diamond, col. 2, line 45 – col. 3, line 4).

As per claim 15, Diamond and Culliss teach all the claimed subject matters as discussed in claim 14, and further teach generating a sample during a sampling frequency (Diamond, col. 2, line 45 – col. 3, line 4).

As per claim 16, Diamond and Culliss teach all the claimed subject matters as discussed in claim 13, and further teach combining the feature vector of the document with a feature vector of the query, the feature vector comprising frequency values for one or more terms that appear in the query (Diamond, col. 18, lines 50-61).

As per claim 17, Diamond and Culliss teach all the claimed subject matters as discussed in claim 16, and further teach scaling the query feature vector based on the viewing time of the document by the user during the sampled user behavior to generate a scaled query feature vector (Culliss, col. 2, lines 45-47).

As per claim 18, Diamond and Culliss teach all the claimed subject matters as discussed in claim 17, and further teach generating a negative scaling factor in response to a short viewing time so that the scaled query feature vector is negative and the feature vector of the document is reduced and the rank of the document is reduced (Culliss, col. 2, lines 45-47).



As per claim 19, Diamond and Culliss teach all the claimed subject matters as discussed in claim 17, and further teach generating a positive scaling factor in response to a long viewing time so that the scaled query feature vector is positive and the feature vector of the document is increased and the rank of the document is increased (Culliss, col. 2, lines 45-47).

Claims 20-26 are rejected on grounds corresponding to the reasons given above for claims 13-19.

As per claim 29, Diamond and Culliss teach all the claimed subject matters as discussed in claim 7, and further teach sampling the actions of a plurality of users in order to modifying the feature vector for the document (Diamond, col. 53-59).

#### ***Contact Information***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chongshan Chen whose telephone number is (571)272-4031. The examiner can normally be reached on Monday - Friday (8:00 am - 4:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Breene can be reached on (571)272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chongshan Chen  
November 26, 2004



JEAN M. CORRIELUS  
PRIMARY EXAMINER